		NTSB ID: DEN02GA102		Aircraft Registration Number: N24GS	
		Occurrence Date: 09/04/2002		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Howard		State CO	Zip Code 81233	Local Time 0656	Time Zone MDT
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility:		Direction From Airport:	
Aircraft Information Summary					
Aircraft Manufacturer Cessna		Model/Series A185F		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>HISTORY OF FLIGHT</p> <p>September 4, 2002, at 0656 mountain daylight time, a Cessna A185F, N24GS, was destroyed when it impacted terrain while maneuvering near Howard, Colorado. The commercial pilot was fatally injured, and his passenger was seriously injured. The State of Colorado's Division of Wildlife (DOW), was operating the airplane under Title 14 CFR Part 91. Visual meteorological conditions prevailed for the local aerial fish stocking flight which originated approximately 20 minutes before the accident. No flight plan had been filed.</p> <p>DOW employees said that the pilot was scheduled to do an aerial fish drop in Hunt Lake (elevation 11,300 feet). He departed Salida, Colorado (elevation 7,489 feet), with a fish hatchery employee as an operations observer. Flight data retrieved from an onboard GPS unit indicates that the airplane flew directly towards the lake and circled two times over Howard, Colorado, while gaining altitude. At 0652:30, the airplane was at 11,429 feet, and on a 250 degree true heading. At 0655:16, the airplane was on a 245 degree true heading and descending at approximately 360 feet per minute. The airplane impacted a ridge, approximately 90 degrees to its left, 5 to 10 seconds later. The last GPS location was approximately 350 feet from the impact site, and approximately 100 feet above it.</p> <p>The injured passenger said that he remembered the flight towards Hunt Lake, but his last recollection was "Jim [the pilot] was pulling back real hard on the steering wheel." He said that when he regained consciousness he smelled fuel vapors, and he exited the airplane.</p> <p>An emergency locator transmitter signal was received at approximately 0750 by other DOW pilots. The airplane was located approximately 1 hour later.</p> <p>PERSONAL INFORMATION</p> <p>The pilot took his last second class Federal Aviation Administration (FAA) flight medical examination on May 1, 2002, and at that time he reported on his application that he had 7,400 hours of flight experience, with 200 hours during the last 6 months. He renewed his flight instructor's certificate on August 21, 2001. The pilot had been flying for the State of Colorado DOW for approximately 20 years.</p> <p>AIRCRAFT INFORMATION</p> <p>The airplane was a single engine, propeller-driven, fixed gear, two seat airplane, which was manufactured by Cessna Aircraft Company in 1976. It was powered by a Continental IO-520-D, six cylinder, reciprocating, horizontally opposed, direct drive, air cooled, normally aspirated (carbureted) engine with a maximum takeoff rating of 300 horsepower at sea level. At a density</p>					
FACTUAL REPORT - AVIATION					

National Transportation Safety Board

FACTUAL REPORT**AVIATION**

NTSB ID: DEN02GA102

Occurrence Date: 09/04/2002

Occurrence Type: Accident

Narrative (Continued)

altitude of 12,350 feet, an engine manufactures representative said it would have been capable of producing approximately 165 horsepower. Aircraft maintenance records indicate that the last annual inspection was accomplished on April 5, 2002. The airplane's tachometer and maintenance records indicated that it had accumulated approximately 9,017 hours of flight time, and the engine had approximately 570 total hours since new.

The airplane was modified with an airborne fish stocking tank, that was divided into nine compartments. Each compartment had a 5 gallon capacity; the fish were fingerlings in size. The tank held approximately 400 pounds of water, and approximately 3 to 4 pounds of fish. Each compartment could be released individually, and the best release altitude was approximately 100 feet above the water.

METEOROLOGICAL INFORMATION

At 0650, the weather on Monarch Pass, Colorado, (elevation 12,030 feet) 280 degrees 22 nautical miles (nm) from the accident site, was as follows: wind 240 degrees at 19 knots; visibility 10 statute miles; clear of clouds; temperature 39 degrees Fahrenheit; dew point 34 degrees Fahrenheit; altimeter setting 30.73 inches. The other three DOW pilots reported that the wind was calm at Salida, Colorado, at the time of their takeoffs. The sunrise was 0636 on the morning of the accident.

The first of the four pilots to depart Salida reported that he encountered (approximately 15 nm from Hunts Lake) a sudden wind gust of approximately 20 to 25 knots at 240 degrees when he reached 12,500 feet. The other two pilots reported encountering occasional downdrafts and wind shears, with occasional moderate turbulence between 11,500 to 12,500 feet.

The density altitude was calculated to be 12,350 feet at the accident site.

WRECKAGE AND IMPACT INFORMATION

The airplane was found (N38 degrees, 23.63'; W105 degrees, 56.10'; elevation 11,662 feet) on a narrow high mountain ridge (elevation 11,662 feet). The ridge was oriented approximately 040-220 degrees, and was lightly forested with 20 to 70 foot conifers. The upper portions of several trees were found on the ground. A ground scar led to the airplane on a 130 degree heading. The airplane was found slightly inverted on its left side. The right wing's outboard 3 feet was separated, and the remainder of the wing was still in place. The left wing was nearly separated from the fuselage, and it was folded back and under the fuselage.

All of the airplane's major components were accounted for at the accident site. The flight control surfaces were all identified, and flight control cable continuity to all control surfaces could only be partially confirmed due to impact damage. The fuselage was bent and crushed, and its cabin volume was slightly reduced. The original shape of the cabin was not maintained. Both main landing gear had separated from fuselage; the tail wheel was still attached to the empennage.

The engine (with all of its accessories) was in place, but attached to the fuselage by only cables and cowlings material. Engine continuity was established through the drive train; thumb compression was noted on all of the cylinders, except the number four cylinder. This cylinder was removed and metal debris was found under the intake valve. The debris matched a 1.5 inch hole in the number four cylinder intake pipe. The propeller hub assembly remained attached to the crankshaft flange. Blade 1 was bent 140 degrees toward the cambered side. It was loose in the hub. Blade 2 was twisted toward the direction of rotation. Both blades exhibited scoring, and leading edge and tip damage.

No preimpact engine or airframe anomalies, which might have affected the airplane's performance, were identified. There was no evidence of postimpact fire.

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Occurrence Date: 09/04/2002

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Narrative (Continued)


MEDICAL AND PATHOLOGICAL INFORMATION


An autopsy was performed on the pilot by the El Paso County Coroner, Colorado Springs, Colorado, for the Fremont County Coroner, Salida, Colorado.


The FAA's Civil Aeromedical Institute (CAMI) in Oklahoma City, Oklahoma, performed toxicology tests on the pilot. According to CAMI's report (#200200241001), the blood was tested for carbon monoxide, cyanide, and drugs, with negative results. The pilot's vitreous was tested for volatiles (ethanol) with negative results.

ADDITIONAL DATA

The airplane, including all components and logbooks, was released to a representative of the owner's insurance company on October 10, 2002.

 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: DEN02GA102			
		Occurrence Date: 09/04/2002			
		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation Ft. MSL	Runway Used	Runway Length	Runway Width
Runway Surface Type: Unknown					
Runway Surface Condition: Unknown					
Type Instrument Approach: Unknown					
VFR Approach/Landing: Unknown					
Aircraft Information					
Aircraft Manufacturer Cessna		Model/Series A185F		Serial Number 185-03093	
Airworthiness Certificate(s): Normal					
Landing Gear Type: Tailwheel					
Homebuilt Aircraft? No	Number of Seats: 2	Certified Max Gross Wt.	3350 LBS	Number of Engines: 1	
Engine Type: Reciprocating	Engine Manufacturer: Continental	Model/Series: IO-520-D	Rated Power: 300 HP		
- Aircraft Inspection Information					
Type of Last Inspection Annual	Date of Last Inspection 04/2002	Time Since Last Inspection 111 Hours	Airframe Total Time 9017 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? Yes	ELT Aided in Locating Accident Site? Yes			
Owner/Operator Information					
Registered Aircraft Owner State of Colorado		Street Address 6060 Broadway			
		City Denver	State CO	Zip Code 80216	
Operator of Aircraft Same as Reg'd Aircraft Owner		Street Address Same as Reg'd Aircraft Owner			
		City	State	Zip Code	
Operator Does Business As:			Operator Designator Code:		
- Type of U.S. Certificate(s) Held: None					
Air Carrier Operating Certificate(s):					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Air Drop					
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First Pilot Information																																																																																				
Name		City		State	Date of Birth																																																																															
On File		On File		On File	On File																																																																															
Age	57																																																																																			
Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot		Certificate Number: On File																																																																																
Certificate(s): Flight Instructor; Commercial																																																																																				
Airplane Rating(s): Multi-engine Land; Single-engine Land; Single-engine Sea																																																																																				
Rotorcraft/Glider/LTA: None																																																																																				
Instrument Rating(s): Airplane																																																																																				
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane																																																																																				
Type Rating/Endorsement for Accident/Incident Aircraft?				Current Biennial Flight Review?																																																																																
Medical Cert.: Class 2		Medical Cert. Status: None		Date of Last Medical Exam: 05/2002																																																																																
<table border="1"> <tr> <th rowspan="2">- Flight Time Matrix</th> <th rowspan="2">All A/C</th> <th rowspan="2">This Make and Model</th> <th rowspan="2">Airplane Single Engine</th> <th rowspan="2">Airplane Multi-Engine</th> <th rowspan="2">Night</th> <th colspan="2">Instrument</th> <th rowspan="2">Rotorcraft</th> <th rowspan="2">Glider</th> <th rowspan="2">Lighter Than Air</th> </tr> <tr> <th>Actual</th> <th>Simulated</th> </tr> <tr> <td>Total Time</td> <td>7600</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Actual	Simulated	Total Time	7600										Pilot In Command(PIC)											Instructor											Last 90 Days											Last 30 Days											Last 24 Hours	1	1	1							
- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night							Instrument					Rotorcraft	Glider	Lighter Than Air																																																																	
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Seatbelt Used? Yes		Shoulder Harness Used? Yes		Toxicology Performed? Yes																																																																																
				Second Pilot?																																																																																
Flight Plan/Itinerary																																																																																				
Type of Flight Plan Filed: Company VFR																																																																																				
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Destination		State	Airport Identifier																																																																																	
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Type of Clearance: Unknown																																																																																				
Type of Airspace: Class G																																																																																				
Weather Information																																																																																				
Source of Briefing: Company; National Weather Service																																																																																				
Method of Briefing: Telephone																																																																																				


 National Transportation Safety Board FACTUAL REPORT AVIATION			NTSB ID: DEN02GA102		
			Occurrence Date: 09/04/2002		
			Occurrence Type: Accident		

Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
MYP	0650	MDT	12030 Ft. MSL	22 NM	280 Deg. Mag.
Sky/Lowest Cloud Condition: Clear				Ft. AGL	Condition of Light: Day
Lowest Ceiling: None			Ft. AGL	Visibility: 10 SM	Altimeter: 30.73 "Hg
Temperature: 4 °C	Dew Point: 1 °C	Wind Direction: 240		Density Altitude: 12350 Ft.	
Wind Speed: 19	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV)	SM	Intensity of Precipitation:		
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information					
Aircraft Damage: Destroyed		Aircraft Fire: None		Aircraft Explosion: None	
Classification: U.S. Registered/U.S. Soil					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot	1				1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers		1			1
- TOTAL ABOARD -	1	1			2
Other Ground					
- GRAND TOTAL -	1	1			2

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 National Transportation Safety Board FACTUAL REPORT AVIATION	NTSB ID: DEN02GA102	
	Occurrence Date: 09/04/2002	
	Occurrence Type: Accident	
Administrative Information		
<p>Investigator-In-Charge (IIC)</p> <p>James F. Struhsaker</p>		
<p>Additional Persons Participating in This Accident/Incident Investigation:</p> <p>Brian Richardson FAA FSDO Denver, CO 80249</p>		
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